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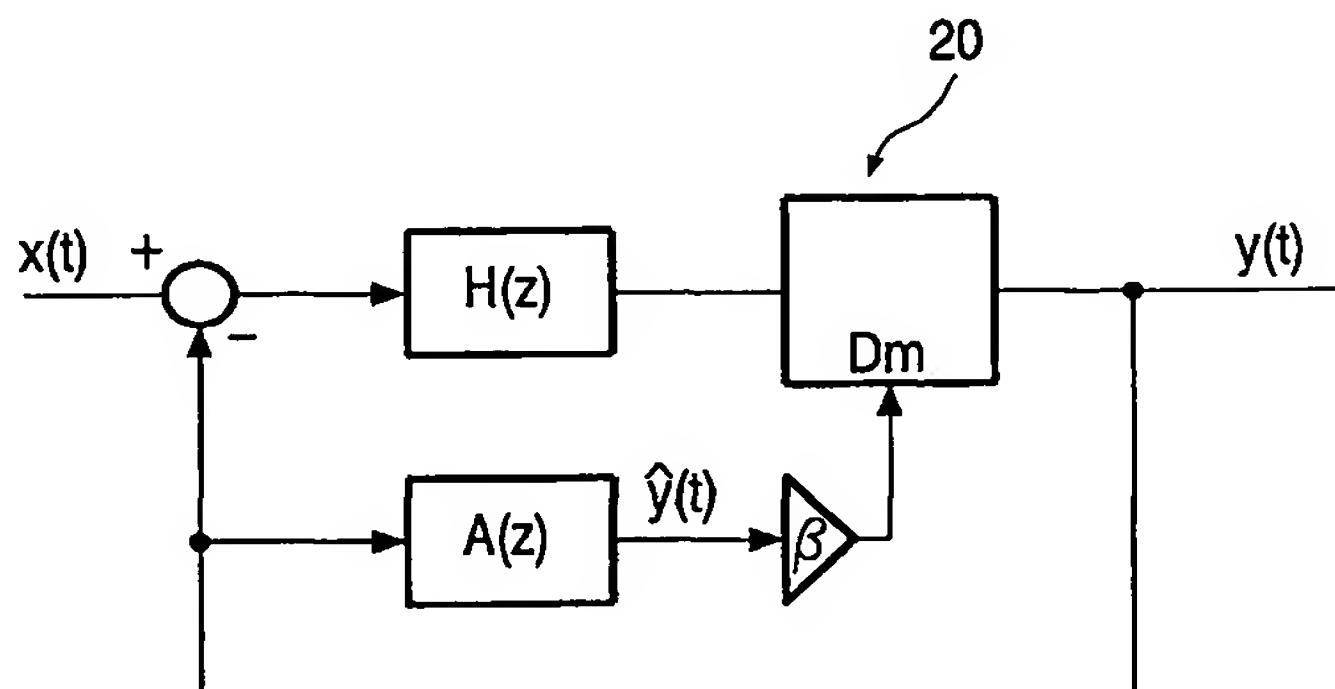
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(54) Title: NOISE-SHAPING DEVICE AND METHOD WITH IMPROVED LOSSLESS COMPRESSION AND GOOD AUDIO QUALITY FOR HIGH FIDELITY AUDIO



(57) **Abstract:** Improved sigma-delta modulator (SDM) for 1-bit digital audio noise shaping. It is the object to produce a bit stream that is compatible with the Scarlet Book specification (Super Audio CD standard, SACD) and that achieves a higher lossless compression ratio when compressed and decompressed according to the standard. This goal is achieved by using a trellis-based SDM and/or a prediction filter within the SDM that is similar or identical to the prediction filter in the encoder. The trellis SDM is designed to produce a predicted signal from a range of candidate signals that is as close to the input signal as possible.

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